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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,776	03/29/2001	Ylian Saint-Hilaire	10559/424001/P10438	5520
20985	7590	03/18/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			SCHEIBEL, ROBERT C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,776

☒ Applicant(s)

SAINT-HILAIRE ET AL.

Examiner

Robert C. Scheibel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-16,23,24,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13-16,23,24,26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see paragraph 2 on page 9, filed 10/20/2004, with respect to the objection to the specification have been fully considered and are persuasive. The objection to the specification has been withdrawn.
2. Applicant's arguments, see paragraph 3 on page 9, filed 10/20/2004, with respect to the objection to claim 9 have been fully considered but they are not persuasive. The majority of the claim has been corrected with respect to this objection. However, "closing a current interface" on lines 16-17 should be changed to "close a current interface".
3. Applicant's arguments, see paragraph 3 on page 9, filed 10/20/2004, with respect to the rejection of claims 1-3, 5-11, 13-16, 23-24, and 26-31 have been considered but are moot in view of the new grounds of rejection. The claims have been significantly amended from their original presentation and the emphasis of the present claims is quite different from that of the original claims. In view of this fact, examiner reconsidered the art, resulting in the rejection below which still uses some of the same prior art as the previous action, but is significantly different. In view of this, the arguments that are still relevant to the present rejection are addressed in this section.

In the fourth paragraph of page 9, applicant argues that the prior art used in the previous rejection are very different than the present invention and emphasizes seamlessly changing to a new connection when it is more preferable. As is emphasized in the new rejection below, Jones clearly discloses a method of seamlessly changing to a new interface when it is more preferable. (See lines 26-28 of column 6, for example.) In the next paragraph, applicant summarizes each of the prior art documents used in the previous office action and in the first full paragraph of page

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10, argues that the combination of these three documents in the previous action was made based on hindsight. For example, applicant argues that nothing in Jones teaches anything about supplementing the hand off by using a Chen et al system. However, a handoff inherently involves a disconnection (from the original interface) and thus Chen and Jones are clearly dealing with analogous art. Although in the rejection below Chen is not relied upon in the same way as in the previous rejection, it would certainly make sense to combine teaching from the two references. The same is true of Verma and Chen. Applicant also argues, starting with the last sentence on page 10 (“Moreover, nothing in the cited prior art...”), that there is nothing in the prior art suggestive of the limitation of selecting the most preferable interface on the list. Examiner disagrees; as was stated in the previous action, Jones clearly discloses taking the user preference into account in Figure 9. As stated above, Jones also clearly discloses seamlessly changing to the more preferable interface. The rejections below provide more detail as to how the prior art discloses the invention as presently claimed.

Claim Objections

4. Claim 9 objected to because of the following informalities: the wording in the claim is not consistent. Specifically:

- in lines 16-17, “closing a current interface” should be “close a current interface”.

The applicant should review the entire claim as well as the remaining claims to ensure that all similar inconsistencies are corrected.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 5-11, 13-16, 23-24, and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,137,802 to Jones et al.

Regarding claims 1, 9, and 23, Jones discloses the limitation of automatically determining one of a plurality of interfaces (the wired interface (46 of Figure 3, 52 of Figure 4) and the wireless interface (48 of Figure 3, 56 of Figure 4)) to use between a mobile device (one of user devices 16, 18, 20, 22, 24, and 26) and a destination, said automatically determining using a list of interfaces from most preferable to least preferable (user preference decision block 904 of Figure 9), and selecting a most preferable available interface on the list (the selection made from decision block 904). Jones discloses the limitation of operating using a selected interface in the transitions to states 1,2, or 4 (as appropriate) in figure 9. Jones also discloses the limitation of altering a record of information transmitted across a network from a mobile unit to a destination based on an acknowledgment by the destination of receipt of the transmitted information in the network layer 42 of Figure 2. In the passage from line 65 of column 3 through line 14 of column 4, Jones clearly suggests the use of TCP at the network layer (~~transmission control protocol~~). The TCP protocol is well known in the art to maintain a record of what data has been transmitted (as well as what subset of that transmitted has been

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acknowledged by the receiver). Thus, Jones inherently discloses this limitation through the use of TCP. Note that claim 23 also has the limitations of maintaining a count of information transmitted from a mobile unit to a home network, receiving at the mobile unit an acknowledgement of received information, and altering the count based on the acknowledgement, all of which are clearly similarly disclosed by Jones in the use of TCP as the network layer. Jones discloses the limitation of determining if a more preferable interface should be opened, and if so seamlessly changing to the more preferable interface by closing a current interface, and establishing the new interface connection in Figure 10. If switching from wireless to wired (or vice versa), the selected interface is opened (step 704 of Figure 10) and the current interface is closed (steps 1003 or 1004 of Figure 10). Note that Jones clearly discloses this changing of interfaces as being seamless in lines 26-28 of column 6. As indicated above, Jones suggests the use of TCP as a network layer and thus also inherently discloses the limitation of transmitting information from the mobile unit to the destination based on the record after the mobile unit establishes a new interface connection to the destination starting with information immediately adjacent to information most recently transmitted to the destination. It is well known that TCP maintains information about what data has been transmitted and that the information is transmitted sequentially with the exception of an acknowledgement timeout. Since the interface change is clearly "seamless" as indicated by Jones throughout (see lines 26-28 of column 6, for example), the behavior of the network layer will continue transparently even when the interfaces are changed. This will result in transmitting information immediately adjacent to the most recently transmitted information. This limitation differs slightly in claim 23 in that the information is transmitted by the mobile unit starting with information immediately

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adjacent to the received information. This is also clearly anticipated by the use of TCP at the network layer. As is well known, TCP provides reliable communications by retransmitting data when it is lost. In Jones, if data is lost (on the wireless interface, for example) prior to the interface switch, TCP will recognize this and transmit the data immediately adjacent to the last received (and acknowledged) information when the acknowledgement timer corresponding to the lost data expires, which is likely to happen after the interface switch.

Regarding claims **2 and 10**, Jones discloses the limitation that the record includes an amount of information transmitted from the mobile unit to the destination in the suggestion of using TCP at the network layer discussed above.

Regarding claims **3, 11, and 27**, Jones discloses the limitation of the acknowledgment including an amount of the received information in the use of TCP at the network layer; the acknowledgment number field in a TCP segment anticipates this limitation.

Regarding claims **5 and 13**, the limitation that the information is transmitted by the mobile unit starting with information immediately adjacent to the received information is also clearly anticipated by the use of TCP at the network layer. As is well known, TCP provides reliable communications by retransmitting data when it is lost. In Jones, if data is lost (on the wireless interface, for example) prior to the interface switch, TCP will recognize this and transmit the data immediately adjacent to the last received (and acknowledged) information when the acknowledgement timer corresponding to the lost data expires, which is likely to happen after the interface switch.

Regarding claims **6 and 14**, the limitation of removing received information from the record is well known in the use of TCP. If this is not done, the size of the transmit buffer in the

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transmitting device (mobile unit) limits the total amount of data that can be transmitted in a given session. This is not conducive to the transmission of large amounts of data as is often done using TCP.

Regarding claims **7, 15, and 26**, Jones discloses the limitation that the new interface includes a reliable link in the use of TCP at the network layer. TCP is well known to provide reliable transport for application data and thus each interface provides a reliable link through its network layer.

Regarding claim **24**, Jones discloses the limitation of transmitting information starting with information immediately adjacent to the information at the end of the count information in the use of TCP at the network layer. It is well known that TCP maintains information about what data has been transmitted and that the information is transmitted sequentially with the exception of an acknowledgement timeout. Since the interface change is clearly “seamless” as indicated by Jones throughout (see lines 26-28 of column 6, for example), the behavior of the network layer will continue transparently even when the interfaces are changed. This will result in transmitting information immediately adjacent to the most recently transmitted information.

Regarding claims **8 and 16**, Jones discloses the limitation of the destination including a home network associated with the mobile unit in lines 18-24 of column 1; the wired company network is the home network.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The newly cited prior art (U.S. Patents 6,826,154, 6,768,726, 6,658,252, 6,611,547,

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6,122,514, 5,974,036, and 5,940,371) describe various methods of handing off from a less preferable to a more preferable interface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 3-14-05
Robert C. Scheibel
Examiner
Art Unit 2666

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